

Climate Ready



SAN FRANCISCO KING TIDE, FEBRUARY 2011

The impacts of climate change can be seen everywhere in California. Rising sea level is threatening communities in all parts of the coast and has proved particularly damaging when combined with extreme storm events. Changing rainfall patterns have led to severe droughts that are affecting water supplies, transforming agriculture, and increasing fire risk. Native habitats and wildlife are migrating to cooler climes as temperatures rise, and many species of animals and plants are facing possible extinction. The well-being of every resident, species, geographic area, and business sector of the State depends on an effective response to a changing climate.

The Coastal Conservancy has been working for more than 35 years to protect natural resources and development along California's coast and around San Francisco Bay. Much of this work has made waterfront areas and resource lands more resistant to the effects of climate change. In 2012, the legislature and governor empowered the Conservancy with a new authority to prepare for and mitigate the effects of climate change and take action against its causes.

In 2013 the Conservancy launched its Climate Ready program to provide a focus for this critical work. Through its first grant round the Conservancy awarded more than \$3 million for 20 projects aimed at an array of objectives including assessments of shoreline vulnerabilities to flooding and rising seas, capture of rainwater in underground basins, reduction of greenhouse gases in the atmosphere, and protection of beaches. The strong response to the first grant announcement—76 proposals seeking more than \$13 million—demonstrates the State's unmet needs and the willingness of diverse communities to join in preparation for the considerable challenges ahead.

Sea Level Rise

The Coastal Conservancy is helping many communities assess and counter threats of sea level rise to public infrastructure and natural environments.

VULNERABILITY ASSESSMENTS & PLANNING

- The cities of **Imperial Beach**, **Hermosa Beach**, and **Benicia**; the counties of **Santa Barbara**, **San Mateo**, and **Sonoma**; **San Francisco International Airport**, and communities around **Monterey** and **Humboldt bays** are analyzing risks from flooding, storm surges, and erosion related to expected sea level rise and identifying adaptation strategies.
- The **Los Angeles County Department of Beaches and Harbors** is preparing an adaptive management plan for protection of the County's iconic coastal beaches.
- The **South San Francisco Bay Salt Pond Restoration Project** is restoring 15,000 acres of wetlands that offer flood protection for many South Bay communities including parts of Silicon Valley.
- The **San Francisco Planning and Urban Research Association (SPUR)** developed the Ocean Beach Master Plan to address sea level rise, protect infrastructure, restore ecosystems, and improve public access.
- The **East Bay Dischargers Authority** is assessing the costs and benefits of decentralizing discharge facilities and using nutrient-rich treated wastewater to enhance the growth of wetlands vegetation for flood protection and capture of greenhouse gases.
- The **City of Arcata** is designing a 22-acre living shoreline on Arcata Bay to serve as a buffer against rising seas while sequestering greenhouse gasses from the atmosphere.

MANAGED RETREAT

- The **Surfers Point Shoreline Resilience Project** in the City of Ventura relocated bike trails, parking lots, and other facilities away from the shoreline, restoring the beach in the process.
- The **Pacifica State Beach Shoreline Resilience Project** employed a strategy that reduced flood hazards, enhanced habitat for steelhead trout, expanded recreational opportunities, and restored wetlands.

Greenhouse Gas Reduction

- The **Bay Area Ridge Trail Council** and the **San Francisco Bay Trail Project** are quantifying the potential reduction of green house gas emissions through increased use of public transportation and trail networks as ways to reduce car usage.
- **North East Trees** is working with **Los Angeles County** to transform a two-acre parcel of land in the Highland Park area into a community park with landscaping that reduces greenhouse gas concentrations, decreases stormwater pollution, and promotes groundwater infiltration. The park is expected to become a model for similar projects elsewhere.
- The **Marin Resource Conservation District** is working with farmers to demonstrate management techniques that decrease levels of atmospheric carbon dioxide and methane through improved pasture management.



Fred Hochstetler

HIGH TIDE IN ELKHORN SLOUGH, MONTEREY COUNTY



Jim Nakagawa

ARMORED SHORELINE IN IMPERIAL BEACH



KING TIDE IN SAUSALITO, DECEMBER 2012

secretivemarsbird



SAN FRANCISCO INTERNATIONAL AIRPORT



BAY AREA RIDGE TRAIL



LIVING REDWOODS = CARBON STORAGE



HIGH SURF ADVISORY IN PACIFICA, JANUARY 2010

Greenhouse Gas Reduction *continued*

- The **Sempervirens Fund** is investigating the feasibility of establishing a carbon bank for the **Santa Cruz Mountains** region that would provide an economic incentive to landowners for the protection of redwoods.

Green Infrastructure

- **Heal the Bay** is performing a cost-benefit analysis of three *Living Streets* programs to guide street maintenance and utility policies in the **City of Los Angeles**. *Complete Streets* encourages low carbon methods of transportation, *Green Infrastructure* captures rainwater, and *Cool Streets* uses materials to reduce the absorption of solar heat.

Water Catchment & Storage

- The **Council for Watershed Health** is analyzing the feasibility of large-scale capture of rainfall and storage in underground aquifers to augment water supplies and reduce reliance on imported water in the **Los Angeles** region.
- The **Resource Conservation District of Santa Cruz County** and **UC-Santa Cruz** are studying stormwater runoff patterns and identifying potential sites to capture rainwater and store it underground.
- **Sonoma County's Gold Ridge Resource Conservation District** is designing large-scale rainwater catchment and storage systems to help farmers adapt to changing rainfall patterns and water availability.

Wildlife & Habitat Conservation

- The **San Diego Zoo Institute for Conservation Research** is restoring 25 acres of endangered coastal sage scrub habitat to reduce the frequency of fires and provide a corridor for wildlife migration.

Regional Climate Collaboratives

The effects of climate change have emerged recently and rapidly. Coordination with other sectors and jurisdictions can help individual communities and institutions assess threats and develop effective responses. The Conservancy is supporting several regional initiatives and collaborations that include a diverse group of public, private, and nonprofit organizations committed to preparing for the emerging impacts of climate change. These groups include:

- The **San Diego Regional Climate Collaborative**, a network of public agencies organized to share expertise and leverage resources
- The **Los Angeles Regional Collaborative for Climate Action and Sustainability**, a network of local and regional governments, the business community, academia, labor, and environmental and community groups
- The **Bay Area Climate and Energy Resilience Project**, a collaborative of more than 100 public, private, and nonprofit organizations
- The **Bay Area Ecosystem Climate Change Consortium**, a group of natural resource managers, scientists, and others organized to sustain the natural environment
- The **Alliance of Regional Collaboratives for Climate Adaptation**, a network of regional collaboratives from across California.



RESPONDING TO A STORM AT ZUMA BEACH IN MALIBU

The Coastal Conservancy is a State agency, established in 1976, that protects and improves natural lands and waterways, helps people get to and enjoy coastal areas, and sustains local economies along California's coast. The Conservancy works along the entire length of the coast, within the watersheds of rivers and streams that extend inland from the coast, and throughout the nine-county San Francisco Bay Area. The Conservancy is non-regulatory and achieves its goals by joining forces with local communities, nonprofit organizations, other government agencies, businesses, and private landowners.

CONSERVANCY PROJECTS :

- Protect, restore, and improve natural areas and wildlife habitats
- Help people get to and enjoy the outdoors by building hiking and biking trails, acquiring and improving parks and beaches, and creating campgrounds and hostels
- Keep our waterways clean and healthy for people and wildlife
- Help communities revitalize their waterfronts
- Support floodwater management and integrate flood-control projects into the life of a community
- Conserve commercial fisheries, working farmland, and forests.

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